What is claimed is:

1. A phase lock loop for receiving a baseband signal having an input frequency and modulating the baseband signal to be a corresponding RF signal having a predetermined transmission frequency for transmitting, the phase lock loop comprising:

a frequency synthesizer for generating a local oscillating signal having a local oscillating frequency;

a first programmable divider for dividing the frequency of the local oscillating signal by a first programmable divisor to generate a reference signal;

a modulator for modulating the frequency of the reference signal according to the baseband signal to generate a corresponding first comparison signal;

a phase detector for detecting phases of the first comparison signal and a second comparison signal, and outputting a corresponding current-controlled I/O signal in responsive to the phase difference of two comparison signals;

a charging pump for receiving the current-controlled I/O signal and accordingly outputting a corresponding control current;

a loop filter for filtering the control current to output a control voltage;

a voltage-controlled oscillator (VCO) for generating the corresponding RF signal for transmitting according to the control voltage, the RF signal being fed back as a feedback signal; and

a frequency converter for receiving the feedback signal and the local oscillating signal to output the second comparison signal to the phase detector in responsive to the frequency difference of the feedback signal and the local oscillating signal;

wherein the first programmable divisor of the first programmable divider is programmable-controlled so as to prevent, except the predetermined transmission frequency, occurrence of a spur frequency in the RF signal due to the interfered local oscillating signal.

2. The phase lock loop of claim 1, wherein the phase lock loop further comprises a phase shift generator for shifting the phase of the reference signal of the first programmable divider by 90 degrees, and then inputting the phase-shifted reference signal into the modulator.

3. The phase lock loop of claim 1, wherein, before the local oscillating signal enters the frequency converter, the frequency of the local oscillating signal is first divided by the second programmable divisor in the second programmable divider, and then the frequency-divided local oscillating signal enters the frequency converter.

4. The phase lock loop of claim 3, wherein, the phase lock loop further comprises a phase shift generator for shifting the phase of the reference signal of the first programmable divider by 90 degrees, and then inputting the phase-shifted reference signal into the modulator.

5. The phase lock loop of claim 4, wherein, the phase lock loop further includes a first filter to filter the signal from the second programmable divider, a second filter to filter the signal leaving the frequency converter, the third filter to filter the signal from the first programmable divider, and a fourth filter to filter the modulated signal from the modulator.

6. The phase lock loop of claim 3, wherein the transmission frequency of the RF signal is F_{tx}, the local oscillating frequency of the local oscillating signal is F_{LO}, the first programmable divisor of the first programmable divider is M, the second programmable divisor of the second programmable divider is N, and F_{tx}, F_{LO}, M,

and N satisfy the following equation:

$$F_{tx} = \left(\frac{M \pm N}{M \times N}\right) \times F_{LO}$$

7. The phase lock loop of claim 1, wherein the phase lock loop is utilized in a RF signal transmission device of a wireless communication system.

8. The phase lock loop of claim 1, wherein the phase lock loop merely comprises the only frequency synthesizer to generate the single local oscillating frequency of the local oscillating signal.

9. A method for generating a RF signal by utilizing a phase lock loop to receive a baseband signal having an input frequency and to modulate the baseband signal to be a corresponding RF signal for further transmitting in a predetermined transmission frequency, the method comprising the following steps:

generating a local oscillating signal having a local oscillating frequency, and dividing the frequency of the local oscillating signal by a first programmable divisor to generate a reference signal;

modulating the reference signal according to the baseband signal to generate a corresponding first comparison signal;

detecting the phases of the first comparison signal and a second comparison signal to output a corresponding current-controlled I/O signal in responsive to the phase difference of two comparison signals;

receiving the current-controlled I/O signal to generate a corresponding control current, and filtering the control current to output a control voltage; and

generating the corresponding RF signal for transmitting according to the control voltage, the RF signal being fed back as a feedback signal; and

generating the second comparison signal according to the frequency

difference between the feedback signal and the local oscillating signal;

wherein the programmable divisor is programmable-controlled so as to prevent, except the predetermined transmission frequency, occurrence of a spur frequency in the RF signal due to the interfered local oscillating signal.

10. The method of claim 9, wherein the phase of the reference signal needs to be shifted by 90 degrees first, and then be modulated by the baseband signal.

11. The method of claim 9, wherein the frequency of the local oscillating signal is divided by the second programmable divisor, and then the frequency difference is calculated by comparing the local oscillating signal with the feedback signal to generate the second comparison signal,

12. The method of claim 11, wherein the phase of the reference signal needs to be shifted by 90 degrees first, and then to be modulated by the baseband signal.

13. The method of claim 9, wherein the transmission frequency of the RF signal is F_{tx}, the local oscillating frequency of the local oscillating signal is F_{LO}, the first programmable divisor of the first programmable divider is M, the second programmable divisor of the second programmable divider is N, F_{tx} and F_{LO} satisfy the following equation:

$$F_{tx} = \left(\frac{M \pm N}{M \times N}\right) \times F_{LO}$$

14. The method of claim 9, wherein the method is applied in a RF signal transmission device of a wireless communication system.

15. The method of claim 9, wherein the method merely comprises the only frequency synthesizer to generate the local oscillating signal.

16. The method of claim 9, wherein at least one filter is employed to filter the signals

in the phase lock loop.